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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/316,754	05/21/1999	SHIA-SAN GONG	AT9-98-884	8260

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EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2127

DATE MAILED: 02/20/2004

11

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/316,754

Applicant(s)

GONG ET AL.

Examiner

Lilian Vo

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 4, and 6 - 8 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1 – 8 are pending.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 4 and 6 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suver (US 6,016,497) in view of Burger et al. (US 6,161,170, hereinafter Burger).
4. Regarding **claim 1**, Suver teaches a method for storing data that has at least some entries with multiple value attributes (abstract, col. 1, lines 24 – 36, col. 3, lines 6 – 17, 25 - 40), comprising the steps of:  
  
storing data in an attribute table (col. 3, lines 6 – 16: a new separate table must be created for storing multiple values data, lines 25 – 40: embedded data is being treated as a tables themselves) or, alternatively, in a merged table (fig. 3, customers table 301) and an overflow table (fig. 3, custaddress table 302, custphones table 303).

Suver however did not clearly teach the steps of profiling the data to determine how to store the data and storing the data optimally based on the profiling step. Nevertheless, Burger teaches the step of profiling the data to determine how to handle the data and handle the data based on the profiling step to provide improved system performance (fig. 6, abstract, col. 10, lines 4 – 22).

It would have been obvious for one of an ordinary skill in the art, at the time the invention was made to incorporate Burger's teaching to Suver's system so that data can be handled more effectively to further improve system performance.

5. Regarding **claim 2**, Suver teaches the method as described in claim 1 wherein the entries with single value attributes are stored in the merged table (fig. 3, table customers).

6. Regarding **claim 3**, Suver teaches the method as described in claim 1, wherein the entries with multiple value attributes are store in the overflow table (fig. 3, custaddress table and custphones table, col. 8, lines 6 – 16, col. 8, line 60 - col. 9, line 12).

7. Regarding **claim 4**, Suver teaches the method as described in claim 1 wherein the overflow table is an attribute table (fig. 3, custaddress table and custphones table, col. 8, lines 6 – 16, col. 8, line 60 .- col. 9, line 12).

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8. Regarding **claim 6**, Suver teaches the method as described in claim 1, wherein the profiling step parses the data to identify entries with single value attributes (col. 1, lines 24 – 36, col. 3, lines 6 - 17).

9. Regarding **claim 7**, Suver teaches the method as described in claim 1 wherein the profiling step parses the data to identify given operations that are performed on the data once stored (figs. 12 and 14).

10. Regarding **claim 8**, Suver teaches the method as described in claim 1 wherein the data is stored in a relational database backing store (col. 1, lines 24 – 36, col. 2, lines 53 – 57, col. 9, lines 15 - 26).

#### ***Allowable Subject Matter***

11. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

12. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kumar, US 6,542,515 B1 and Malloy et al., US 5,940,818, both disclose defining a schema for each data type.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 703-305-7864. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo  
Examiner  
Art Unit 2127

lv  
February 12, 2004

  
**MENG-AL T. AN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**